



AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (*currently amended*) A current controlled voltage regulator for regulating a voltage at a load, comprising:
 - a connector to connect to a power source;
 - at least one resistive element coupled in series between the power source and the load;
 - a control circuit coupled across the at least one resistive element to receive first and second signals indicative of a drive level of the voltage regulator and ~~coupled to~~ provide a control signal in response to a difference between the first and second signals; and
 - a conduction device coupled across the load and coupled to the control circuit to receive the control signal and ~~coupled to~~ decrease conduction if the difference increases and increase conduction if the difference decreases, wherein the change in conduction is substantially proportional to the difference between the first and second signals, and wherein a substantially constant voltage is maintained across the load.
2. (*original*) The current controlled voltage regulator of claim 1, wherein the control circuit comprises an operational amplifier.
3. (*currently amended*) ~~The current controlled voltage regulator of claim 1,~~ A current controlled voltage regulator, comprising:
 - a control circuit coupled to receive first and second signals indicative of a drive level of the voltage regulator and coupled to provide a control signal in response to a difference between the first and second signals, wherein the control circuit ~~comprises~~ includes
 - a first conversion device coupled to receive the first signal and coupled to provide a digital representation of the first signal;

a second conversion device coupled to receive the second signal and coupled to provide a digital representation of the second signal; and

a third conversion device coupled to receive the first and second digital representations and coupled to provide a difference between the first and second digital representations; and

a conduction device coupled to receive the control signal and coupled to decrease conduction if the difference increases and increase conduction if the difference decreases, wherein the change in conduction is substantially proportional to the difference between the first and second signals.

4. *(original)* The current controlled voltage regulator of claim 1, wherein the conduction device comprises a transistor having a first conduction terminal coupled to receive the first signal and a control terminal coupled to receive the control signal.

5. *(original)* The current controlled voltage regulator of claim 4, wherein the transistor includes a field effect transistor.

6. *(currently amended)* An article of manufacture comprising a program storage medium readable by a computer, the computer coupled to at least one resistive element coupled in series between a power source and a load and coupled to a conduction device coupled across the load, the medium tangibly embodying ~~one or more programs of instructions~~ executable by the computer to perform ~~a method of operating a current controlled voltage regulator, the method steps comprising:~~

receiving first and second signals from terminals of the at least one resistive element, the first and second signals being indicative of a drive level of the power source voltage regulator;

computing a difference between the first and second signals; and

controlling a conductive state of the[[a]] conduction device in response to the difference, wherein the conductive state is changed substantially in proportion to the difference to maintain a substantially constant voltage across the load.

7. (*currently amended*) The article of manufacture of claim 6, wherein receiving first and second signals comprises using the at least one[[a]] resistive ~~element~~component to develop a potential difference between the first and second signals, wherein the potential difference is indicative of the drive level.

8. (*original*) The article of manufacture of claim 6, wherein computing the difference comprises:

- receiving the first signal at an input of a first conversion device;
- receiving the second signal at an input of a second conversion device; and
- generating the difference at the output of a third conversion device.

9. (*currently amended*) A method of operating a current controlled voltage regulator, comprising:

generating first and second voltage signals indicative of a drive level of the voltage regulator, the first and second voltage signals being generated at endpoints of at least one resistive component coupled in series with a power source and a load;

receiving the first and second voltage signals ~~indicative of a drive level of the voltage regulator;~~and measuring a difference between the first and second voltage signals; ~~and~~

coupling a conduction device across the load; and

controlling a conductive state of the[[a]] conduction device in response to the difference, wherein the conductive state is changed in proportion to the difference to maintain a substantially constant voltage across the load.

10. (*currently amended*) The method of claim 9, wherein receiving first and second voltage signals comprises using the[[a]] resistive component to develop a potential difference between the first and second voltage signals, wherein the potential difference is indicative of the drive level.

11. (*currently amended*) The method of claim 9, wherein measuring the difference comprises:

- receiving the first voltage signal at a first input of an amplifier;
- receiving the second voltage signal at a second input of the amplifier; and

generating the difference at the output of the amplifier.

12. (*currently amended*) The method of claim 9, wherein measuring the difference comprises:
receiving the first voltage signal at an input of a first conversion device;
receiving the second voltage signal at an input of a second conversion device; and
generating the difference at the output of a third conversion device.

13. (*canceled*)

14. (*canceled*)

15. (*currently amended*) ~~The current controlled voltage regulator of claim 13,~~ In a power supply, a voltage regulator controlling output current to substantially eliminate voltage variations, the voltage regulator comprising:

a current control circuit coupled to receive first and second signals indicative of a drive level of the voltage regulator and coupled to provide a control signal in response to a difference between the first and second signals, wherein the current control circuit comprises:includes

a first conversion device coupled to receive the first signal and coupled to provide a digital representation of the first signal;

a second conversion device coupled to receive the second signal and coupled to provide a digital representation of the second signal; and

a third conversion device coupled to receive the first and second digital representations and coupled to provide a signal substantially proportional to the difference between the first and second digital representations; and

a current conduction device coupled to receive the control signal and coupled to increase current conduction if the difference decreases and decrease current conduction if the difference increases, wherein the change in conduction is substantially proportional to the difference between the first and second signals.

16. (*canceled*)

17. (canceled)

18. (currently amended) A current controlled voltage regulator for use in regulating a load voltage supplied by a power supply to a load, comprising:

sensing means coupled in series with the power supply and the load for providing first and second signals indicative of a drive level of the voltage regulator;

a-controlling means coupled across the sensing means for receiving the to receive first and second signals indicative of a drive level of the voltage regulator and coupled to provide for providing a control signal in response to a difference between the first and second signals;
and

a-conductionconducting means coupled across the load and coupled to the control means for receiving to receive the control signal and coupled to increasefor increasing conduction if the difference decreases and decreasedecreasing conduction if the difference increases, wherein the change in conduction is substantially proportional to the difference between the first and second signals to maintain a substantially constant voltage across the load.

19. (currently amended) The current controlled voltage regulator of claim 18, wherein the controlling means comprises an operational amplifier.

20. (currently amended) ~~The current controlled voltage regulator of claim 18,~~A current controlled voltage regulator, comprising:

controlling means coupled to receive first and second signals indicative of a drive level of the voltage regulator and coupled to provide a control signal in response to a difference between the first and second signals wherein the control means ~~comprises:~~includes

a first conversion means coupled to receive the first signal and coupled to provide a digital representation of the first signal;

a second conversion means coupled to receive the second signal and coupled to provide a digital representation of the second signal; and

a third conversion means coupled to receive the first and second digital representations and coupled to provide a signal substantially proportional to the difference between the first and second digital representations; and conducting means coupled to receive the control signal and coupled to increase conduction if the difference decreases and decrease conduction if the difference increases, wherein the change in conduction is substantially proportional to the difference between the first and second signals.

21. (*currently amended*) The current controlled voltage regulator of claim 18, wherein the ~~conduction~~conducting means comprises a transistor having a first conduction terminal coupled to receive the first signal and a control terminal coupled to receive the control signal.

22. (*original*) The current controlled voltage regulator of claim 21, wherein the transistor includes a field effect transistor.

23. (*new*) The current controlled voltage regulator of claim 1, wherein the control circuit comprises:

a first conversion device coupled to receive the first signal and coupled to provide a digital representation of the first signal;

a second conversion device coupled to receive the second signal and coupled to provide a digital representation of the second signal; and

a third conversion device coupled to receive the first and second digital representations and coupled to provide a difference between the first and second digital representations.

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to FIGs. 2 and 3. This sheet, which includes FIGs. 1, 2 and 3, replaces the original sheet including FIGs. 1, 2 and 3. In FIGs. 2 and 3, the legend "PRIOR ART" has been added.

Attachment: Replacement Sheet (last page)